

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 19/3/77

Description *Inverted, Compound, Surface Condensing.*
 Made by *Messrs J. Richardson & Sons.*
 When *March 1877* At *Hartlepool.*
 Diameter of cylinder *29" x 55"* Length of stroke *33"*
 No. of revolutions per minute *about 65.*
 Point of cut off *1/2 stroke.*
 Diameter of screw shaft *9 1/4"*
 Diameter of crank shaft journals *9 1/4"*
 Diameter of screw, or of paddle wheel *13.3"*
 Pitch of screw *15.6"*
 No. of blades, *4* Total surface *52 sq. feet.*
 No. of bilge pumps *2* and sizes *2 1/8 dia x 34 stroke.*
 Do they pump from each compartment *Engine room, aft well and fore hold.*

Are all the bilge suction pipes fitted with roses *yes.*
 No. of feed pumps *2* and sizes *3 1/2 dia x 23 1/2 stroke.*
 What gauges are there attached to the engines and boilers ... *1 on each end of Boiler for steam pressure. 1 vacuum gauge.*
 Description and size of Donkey Pumps ... *2 inverted double acting 7 1/2 dia x 9 stroke and 3 1/2 dia x 7 stroke. Large one from Sea Tanks and bilges of engine room. Small one from ...*
 Where do they pump from *from fore hold, sea. bilges of engine room, aft well & fore hold.*
 No. of bilge injections *one* and sizes *4 1/2 inches*
 Are they connected to air, or circulating pumps *to circulating.*
 Is there a hand pump in the engine room *yes.*
 Can it be worked by the main engines *no.*
 Is there a deck hose of sufficient length to reach to any part of the vessel *yes.*

MAIN BOILERS.

Number *one* Description *Cylindrical, Multitubular and fired from each end.*
 Made by *Messrs J. Richardson & Sons.*
 When *March 1877* At *Hartlepool.*
 Working pressure *65 lbs per sq. inch.*
 Tested by hydraulic pressure to *130 lbs*, Date *Dec 13/76*
 Description of super-heating apparatus *none.*
 Can each boiler be worked separately *only one boiler.*

Can the super-heater be shut off and the boilers worked separately }
 Description and area of safety valves on each boiler *2 spring safety valves 4 3/4 dia = 35.4 sq. ins. area.*
 No. of square feet of fire-grate surface in each boiler *59.*
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *yes.*
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. *yes (except bilge suction in fore hold when cargo is in)*

DONKEY BOILER.

Description *Upright, Cyl. with 2 Cross tubes.*
 Where fixed *in the stokehold.*
 Working pressure *53 lbs.*

Tested by hydraulic pressure to *130 lbs*, Date *Jan 30/77*
 Description and area of safety valves *1 loaded direct 2 1/4" dia. 1 lever & weight 2 1/4" = 7.9 area.*
 No. of square feet of fire grate *11.*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *yes.*
 Are they Kingston valves or common cocks ... *stop valves & cocks.*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates *yes.*
 Are the discharge pipes above or below the deep water line *at the deep load line.*
 Are they each fitted with a discharge valve on the plating of the vessel *yes.*

What pipes are carried through the bunkers *none.*
 How are they protected *new.*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *yes.*
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *yes.*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *sluice door fitted. Tunnel open to the gutter ways of aft tank.*

J. Richardson & Sons
of Chester

Manufacturer. *Except of the Donkey boiler*

I was present when steam was raised and the engines worked. Steam 65 lbs, vacuum 27 ins. Revols 73. all satisfactory. Feb 10th 1877
W. A.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *"Thesilla"* owned by *Lawrence & Greenwell* of the Port of *London* of *794 67/100* Tons Register, and *120* Registered Horse Power, and that they have been carefully inspected and examined by me at *Hartlepool.* and found to be at this date, viz., *March 9th 1877* in good order and safe working condition.

Amount of Fee for Survey *£ 6 : 0 :*
 (Travelling Expenses, if any, *£ 2.5*) *£ 8.5*

William Allison,
 Engineer Surveyor to Lloyd's Register of Shipping.